

ORDER FOR SUPPLIES OR SERVICES					PAGE 1 OF 1													
1. CONTRACT/PURCH ORDER/AGREEMENT NO. N00014-09-D-0096		2. DELIVERY ORDER/CALL NO. 1003		3. DATE OF ORDER/CALL (YYYYMMDD)		4. REQUISITION/PURCH REQUEST NO. 33FR14391-00												
5. ISSUED BY Office of Naval Research ONR251 Lynn Christian 703 696 1175 Email: Lynn.Christian@navy.mil 875 North Randolph Street Suite W1275 Arlington VA 22203		6. CODE N00014		7. ADMINISTERED BY (if other than 5) DOWA RAYTHEON 50 APPLE HILL DRIVE 7/FB2 TEWKSBURY MA 01876-1199		8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER (See Schedule of work)												
9. CONTRACTOR NAME AND ADDRESS RAYTHEON COMPANY 50 APPLE HILL DR TEWKSBURY MA 01876		10. CODE DAYPT		11. FACILITY		12. DELIVER TO FOR POINT BY (DDN) (YYYYMMDD) Multiple												
				13. DISCOUNT TERMS		14. X IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN OWNED												
				15. MAIL INVOICES TO THE ADDRESS IN BLOCK														
16. SHIP TO CODE N00014 Mr. Dennis Cole Program Executive Office Integrated Warfare System J 1331 Isaac Hall Avenue SE Building 197 Washington Navy Yard DC 20376		17. PAYMENT WILL BE MADE BY CODE N00337 DEAS COLUMB. NORTH 5071-R09337 PO BOX 140266 COLUMBUS OH 43214-2266		18. CODE N00337		19. MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCK 1 AND 2												
20. TYPE OF ORDER <input checked="" type="checkbox"/> DELIVERY CALL <input type="checkbox"/> PURCHASE		21. The delivery contract is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract. Reference your Agency: ( ) ( ) ( ) THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE TERMS AND CONDITIONS SET FORTH AND AGREES TO PERFORM THE SAME. Signature: Daniel F. O'Neil Sr. Contracts Mgr. 2013/09/24 TYPED NAME AND TITLE DATE SIGNED (YYYYMMDD)																
22. If this box is marked, supplier must sign Acceptance and return the following number of copies: 17. ACCOUNTING AND APPROPRIATION DATA/CLAL USE See Schedule																		
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>18. ITEM NO.</th> <th>19. SCHEDULE OF SUPPLIES/SERVICES</th> <th>20. QUANTITY ORDERED/ACCEPTED*</th> <th>21. UNIT</th> <th>22. UNIT PRICE</th> <th>23. AMOUNT</th> </tr> </thead> <tbody> <tr> <td></td> <td>NAVRIS / SDN Number: 1106197 Continued ...</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							18. ITEM NO.	19. SCHEDULE OF SUPPLIES/SERVICES	20. QUANTITY ORDERED/ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT		NAVRIS / SDN Number: 1106197 Continued ...				
18. ITEM NO.	19. SCHEDULE OF SUPPLIES/SERVICES	20. QUANTITY ORDERED/ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT													
	NAVRIS / SDN Number: 1106197 Continued ...																	
*If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and enclose.		24. UNITED STATES OF AMERICA BY: [Signature]		25. TOTAL \$6,000,000.00														
26. QUANTITY IN COLUMN 19 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED.		27. DATE (YYYYMMDD)		28. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE														
29. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		30. DATE (YYYYMMDD)		31. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE														
32. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE		33. SHIP NO.		34. D.D. VOUCHER NO.														
35. TELEPHONE NUMBER		36. E-MAIL ADDRESS		37. INITIALS														
38. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT.		39. PARTIAL FINAL		40. PAID BY														
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		41. AMOUNT VERIFIED CORRECT FOR														
42. RECEIVED AT		43. RECEIVED BY (Print)		44. CHECK NUMBER														
45. DATE RECEIVED (YYYYMMDD)		46. TOTAL CON. TAYERS		47. BILL OF LADING NO.														
48. BSR ACCOUNT NUMBER		49. BSR VOUCHER NO.																

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DD FORM 1155, DEC 2001

**PREVIOUS EDITION IS OBSOLETE.**

"Readable Copy"

## CONTINUATION SHEET

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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Base Period The Contractor shall furnish the necessary personnel and facilities to conduct the research effort as described in the statement of work and provide reports and data in accordance with Exhibit A. (Not Separately Priced) Product/Service Code: AD94				
0001AA	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AB	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AC	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AD	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]  Continued ...				[REDACTED]

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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AE	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AF	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AG	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AH	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AJ	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]  Continued ...				[REDACTED]

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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AK	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AL	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AM	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AN	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AP	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]  Continued ...				[REDACTED]

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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AQ	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: (b) (4)				(b) (4)
0001AR	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: (b) (4)				(b) (4)
0001AS	Monthly Progress Reports (Technical) (In accordance with CDRL A001) Product/Service Code: AD94  ACRN: AA Funded: (b) (4)				(b) (4)
0001AT	Meeting Materials (Kick off, Program/Technical Reviews, TIMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: (b) (4)				(b) (4)
0001AU	Meeting Materials (Kick off, Program/Technical Reviews, TIMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: (b) (4)  Continued ...				(b) (4)

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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AV	Meeting Materials (Kick off, Program/Technical Reviews, TMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AW	Meeting Materials (Kick off, Program/Technical Reviews, TMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AX	Meeting Materials (Kick off, Program/Technical Reviews, TMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AY	Meeting Materials (Kick off, Program/Technical Reviews, TMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001AZ	Meeting Materials (Kick off, Program/Technical Reviews, TMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  Continued ...				[REDACTED]

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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	ACRN: AA Funded: \$60,000.00				
0001BA	Meeting Materials (Kick off, Program/Technical Reviews, TIMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001BB	Meeting Materials (Kick off, Program/Technical Reviews, TIMS and Final Review (In accordance with CDRL A002) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001BC	Existing Radar System Detailed Design Description Report (In accordance with CDRL A003) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001BD	Proposed Enterprise Air Surveillance Radar Study (EASR) System Description Document report (In accordance with CDRL A004) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001BE	Proposed EASR System Radar Performance Study Report (In accordance with CDRL A006) Product/Service Code: AD94 Continued ...				[REDACTED]



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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	ACRN: AA Funded: [REDACTED]				
0001BF	Program Management Plan (In accordance with CDRL A007) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001BG	Total Ownership Cost Model (In accordance with CDRL A008) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001BH	Risk reduction Demonstration Plan and Results Report (In accordance with CDRL A009) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]				[REDACTED]
0001BJ	Final Report (In accordance with CDRL A005) Product/Service Code: AD94  ACRN: AA Funded: [REDACTED]  Accounting Summary AA -----1721319A5BJ252WS02000501202D000000A100 01713292 \$6,000,000.00  Continued ...				[REDACTED]

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NAME OF OFFEROR OR CONTRACTOR

RAYTHEON COMPANY

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	<p>The firm fixed price amount of this effort is \$6,000,000.</p> <p>The obligated amount of award: \$6,000,000.00. The total for this award is shown in box 25.</p>				

## **SECTION C - Description/Specifications**

### *ONR 0095 Statement of Work- Task Order*

The research effort to be performed hereunder shall be subject to the requirements and standards contained in Exhibit A and the following paragraph.

The Contractor shall conduct the research effort under CLIN(s) 0001 in accordance with paragraphs 3.0 through 4.0 of Attachment Number 1 Statement of Work entitled, "Enterprise Air Surveillance Radar (EASR) Study".

### *ONR 0122 Task Order*

This task order award is applicable to CLIN 0002 of the basic contract, N00014-09-D-0696.

## **SECTION D - Packaging and Marking**

### *ONR D Section D*

This section was intentionally left blank.

## **SECTION E - Inspection and Acceptance**

### *ONR 0120 Inspection and Acceptance- Order*

Inspection and acceptance of deliveries under this order will be accomplished by the Contracting Officer's Representative designated below, who shall have thirty (30) days after delivery for acceptance.

Program Executive Office  
Integrated Warfare Systems 2  
Attn: Ms Ana Diaz,  
1333 Isaac Hull Avenue SE  
Washington Navy Yard DC 20376  
E-Mail: ana.m.diaz@navy.mil

## **SECTION F - Deliveries and Performance**

### *ONR 0043 Period of Performance for Task Order*

The research effort performed under CLIN 0001 shall be conducted from date of task order award through eighteen (18) months.

The total period of performance of this task order shall not exceed eighteen (18) months.

### *00ONR 0119 Deliverable/Distribution- Task Order*

Distribution, consignment and marking instructions for all deliverables under this task order shall be F.O.B. Destination in accordance with Enclosure Number 1 of Exhibit A. The address for the cognizant Program Officer is in Block 14 on the DD Form 1155 (Page 1) of this task order for items that cannot be sent electronically.

The Contractor shall deliver all SLINs in accordance with the schedule below:

SLIN NUMBER	REPORT NAME	NUMBER OF REPORTS	DUE DATE
0001AA	Monthly Progress Report	1	No later than (NLT) 15 October 2013 After Receipt of Order (ARO)
0001AB	Monthly Progress Report	1	NLT 15 November 2013 ARO
0001AC	Monthly Progress Report	1	NLT 15 December 2013 ARO
0001AD	Monthly Progress Report	1	NLT 15 January 2014 ARO
0001AE	Monthly Progress Report	1	NLT 15 February 2014 ARO
0001AF	Monthly Progress Report	1	NLT 15 March 2014 ARO
0001AG	Monthly Progress Report	1	NLT 15 April 2014 ARO
0001AH	Monthly Progress Report	1	NLT 15 May 2014 ARO
0001AJ	Monthly Progress Report	1	NLT 15 June 2014 ARO
0001AK	Monthly Progress Report	1	NLT 15 July 2014 ARO
0001AL	Monthly Progress Report	1	NLT 15 August 2014 ARO
0001AM	Monthly Progress Report	1	NLT 15 September 2014 ARO
0001AN	Monthly Progress Report	1	NLT 15 October 2014 ARO
0001AP	Monthly Progress Report	1	NLT 15 November 2014 ARO
0001AQ	Monthly Progress Report	1	NLT 15 December 2014 ARO
0001AR	Monthly Progress Report	1	NLT 15 January 2015 ARO
0001AS	Monthly Progress Report	1	NLT 15 February 2015 ARO
0001AT	Meeting Materials	1	NLT 45 days ARO
0001AU	Meeting Materials	1	NLT 5 months ARO
0001AV	Meeting Materials	1	NLT 6 months ARO
0001AW	Meeting Materials	1	NLT 9 months ARO
0001AX	Meeting Materials	1	NLT 10 months ARO
0001AY	Meeting Materials	1	NLT 13 months ARO
0001AZ	Meeting Materials	1	NLT 14 months ARO
0001BA	Meeting Materials	1	NLT 17 months ARO
0001BB	Meeting Materials	1	NLT 18 months ARO
0001BC	Existing Radar System Detailed Design Description Report	1	NLT 2 months ARO
0001BD	Proposed EASR System Description Document (SDD) Report	1	NLT 6 months ARO
0001BE	Proposed EASR System Radar Performance Study Report	1	NLT 10 months ARO
0001BF	Program Management Plan	1	NLT 30 days ARO
0001BG	Total Ownership Cost (TOC) Model	1	NLT 10 months ARO
0001BH	Risk Reduction Demonstration Plan and Results Report	1	NLT 6 months ARO
0001BJ	Final Report	1	NLT 18 months ARO

## **SECTION G - Contract Administration Data**

*DFAR 252.232-7006 Wide Area WorkFlow Payment Instructions. (MAY 2013)*

(a) *Definitions.* As used in this clause-

"Department of Defense Activity Address Code (DoDAAC)" is a six position code that uniquely identifies a unit, activity, or organization.

"Document type" means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

"Local processing office (LPO)" is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) *Electronic invoicing.* The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) *WAWF access.* To access WAWF, the Contractor shall-

(1) Have a designated electronic business point of contact in the System for Award Management at <https://www.acquisition.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this web site.

(d) *WAWF training.* The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the "Web Based Training" link on the WAWF home page at <https://wawf.eb.mil/>

(e) *WAWF methods of document submission.* Document submissions may be via web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) *WAWF payment instructions.* The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order.

(1) *Document type.* The Contractor shall use the following document type(s).

Invoice as 2-in-1

*(Contracting Officer: Insert applicable document type(s).)*

*Note: If a "Combo" document type is identified but not supportable by the Contractor's business systems, an "Invoice" (stand-alone) and "Receiving Report" (stand-alone) document type may be used instead.)*

(2) *Inspection/acceptance location.* The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

Destination/Destination

*(Contracting Officer: Insert inspection and acceptance locations or "Not applicable.")*

(3) *Document routing.* The Contractor shall use the information in the Routing Data Table below only to

fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

**Routing Data Table\***

<i>Field Name in WAWF</i>	<i>Data to be entered in WAWF</i>
Pay Official DoDAAC	HQ0337
Issue By DoDAAC	N00014
Admin DoDAAC	S2205A
Inspect By DoDAAC	<input type="checkbox"/>
Ship To Code	<input type="checkbox"/>
Ship From Code	<input type="checkbox"/>
Mark For Code	<input type="checkbox"/>
Service Approver (DoDAAC)	S2205A
Service Acceptor (DoDAAC)	N00014
Accept at Other DoDAAC	<input type="checkbox"/>
LPO DoDAAC	<input type="checkbox"/>
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	<input type="checkbox"/>

(4) *Payment request and supporting documentation.* The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) *WAWF email notifications.* The Contractor shall enter the e-mail address identified below in the "Send Additional Email Notifications" field of WAWF once a document is submitted in the system.

ana.diaz@navy.mil

☐

(g) *WAWF point of contact.* (1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.

☐

"Not applicable."

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.

**ONR 0046 Invoices**

Invoices shall be submitted in accordance with Section G of the basic contract or ordering agreement.

#### *ONR 0118 Type of Order*

This is a firm fixed price task order.

#### *ONR 5252.204-9722 Electronic Document Access (APR 2012)*

The Office of Naval Research (ONR) award and modification documents are now available via the Electronic Document Access System (EDA). EDA is a web-based system that provides secure online access, storage, and retrieval of awards and modifications to Department of Defense (DoD) employees and vendors. An ONR representative will enter the contact information for vendor notification of up to two (2) vendor representatives into EDA for each contract. Once an executed ONR contract document is loaded into EDA, the designated vendor representative(s) will automatically receive an email notification that the document is available in EDA. The vendor is responsible for retrieving the document from EDA; ONR will no longer mail hard copies to vendors.

Each vendor is responsible for providing ONR with their vendor representatives' contact information as well as any changes to their contact information for each ONR contract. Vendors shall submit EDA vendor representative contact information changes to the cognizant ONR Contract Specialist or Contracting Officer of each ONR contract. Each request to change EDA vendor representative contact information shall include the following information:

1. Contract number
2. Email address
3. First name
4. Last name
5. Organization

Users must be aware that EDA inactivates user accounts for non-use after 90 days. Failure to use your account will result in inactivation. A password reset and EDA POC approval is required to reactivate account.

### **SECTION H - Special Contract Requirements**

#### *ONR 0038 Comprehensive Subcontracting Plan*

The Contractor's Comprehensive Subcontracting Plan entitled Raytheon Comprehensive Small Business Subcontracting Plan For utilization of small, small disadvantaged, women-owned small business, veteran owned small business, service disabled veteran owned small business, small business, small business in HUB Zones and for Historically Black Colleges and Minority Institutions for Department of Defense Contracts.

, dated 26 September 2012, effective from 01 October 2012 through 30 September 2013 is hereby incorporated by reference.

#### *ONR 0070 Consent to Subcontract and/or Hire Consultants*

The services of the following subcontractors and/or consultants have been identified as necessary for the performance of this contract:

General Dynamics

The preceding listing of subcontracts were evaluated during negotiations as required by Paragraph (j) of the contract clause at FAR 52.244-2 entitled "Subcontracts" and therefore do not require consent in accordance with paragraphs (c) and (e) of the Subcontracts clause. This consent is based upon the information

submitted by the prime contractor in accordance with FAR 52.244-2 (e) (1) (i) through (vii).

For additional subcontracts beyond those listed above, the Contracting Officer's written consent to subcontract is only required in accordance with Paragraphs (b), (c), and (d) of FAR 52.244-2.

ONR has delegated contract administration to the Administrative Contracting Officer (ACO) at the cognizant Contract Administration Office (Block 7 of this DD Form 1155 or Block 6 of the Standard Form 26). Although ONR has provided authority to subcontract for the preceding list of subcontracts, ONR is not retaining any post award function for the consent of subcontracts in accordance with FAR 42.302(a)(51). Therefore, any consents to subcontract required in accordance with FAR 52.244-2 after contract award shall be submitted to the ACO for action.

*ONR 5252.237-9705 Key Personnel (DEC 1988)*

(a) The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.

(b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least thirty (30) days in advance forty-five (45) days if security clearance must be obtained, of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor in writing of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel:

EASR Program Manager, [REDACTED]  
Chief Engineer, [REDACTED]  
Electrical Engineering Lead, [REDACTED]  
Mechanical Engineering Lead, [REDACTED]  
Demonstration Lead, [REDACTED]  
Software Lead, [REDACTED]  
Whole Life Engineering Lead, [REDACTED]  
Systems Engineering Support, [REDACTED]

*ONR 5252.242-9720 CONTRACTING OFFICER'S REPRESENTATIVE (COR) (SEP 1996)*

The COR for this contract is:

Name: Ana Diaz

Code: PEO IWS 2



Mailing Address: 1333 Isaac Hull Avenue SE  
Washington Navy Yard, DC 20376

Telephone No: 202-781-5318

The Alternate COR for this contract is:

Name: None

Code: N/A

Mailing Address: N/A

Telephone No: N/A

The COR will act as the Contracting Officer's representative for technical matters, providing technical direction and discussion as necessary with respect to the specification or statement of work, and monitoring the progress and quality of contractor performance. The COR is not an Administrative Contracting Officer and does not have authority to take any action, either directly or indirectly, to change the pricing, quantity, quality, place of performance, delivery schedule, or any other terms and conditions of the contract (or delivery order), or to direct the accomplishment of effort which goes beyond the scope of the statement of work in the contract (or delivery order).

When, in the opinion of the contractor, the COR requests effort outside the existing scope of the contract (or delivery order), the contractor shall promptly notify the contracting officer (ordering officer) in writing. No action shall be taken by the contractor until the contracting officer (or ordering officer) has issued a modification to the contract (or delivery order) or has otherwise resolved the issue.

In the absence of the COR named above (due to reasons such as leave, illness, official travel), all responsibilities and functions assigned to the COR shall be the responsibility of the alternate COR acting on behalf of the COR.

## **SECTION I - Contract Clauses**

This task order is subject to the Section I clauses of the basic contract, N00014-09-D-0696.

## **SECTION J - List of Documents, Exhibits and Other Attachments**

<b>Attachment Number</b>	<b>Attachment Title</b>	<b>Date</b>	<b>Number of Pages</b>	<b>Cross Reference Materials</b>	<b>Document Version</b>
A	Exhibit A Contract Data Requirements List with Contract Data Requirements List for Instructions for Distribution	08/27/2013	11		BASE
1	Statement of Work	08/27/2013	9		BASE
2	Report Documentation Page	08/27/2013	1		BASE
3	Department of Defense Contract Security Classification Specification	08/27/2013	3		BASE
4	Contracting Officer's Representative Appointment Letter	08/27/2013	3		BASE

## **SECTION K - Representations, Certifications, and Other Statements of Bidders**

*ONR 0049 ONR and SAM Reps and Certs*

The Contractor's SAM validation dated from: 03 April 2013 to 03 April 2014 is hereby incorporated into this contract by reference. ONR Contract Specific Representations and Certifications, dated 22 May 2013 are hereby incorporated by reference.

CONTRACT DATA REQUIREMENTS LIST				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget Paperwork Reduction Project (0704-0188), Washington, DC 20503.					
A. CONTRACT LINE ITEM NO. CLIN 0001 - EASR Study		B. EXHIBIT A		C. CATEGORY TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>	
D. SYSTEM/ITEM Enterprise Air Surveillance Radar (EASR) TO 0010			E. CONTRACT/PR NO. N00014-09-D-0696/0003		F. CONTRACTOR Raytheon Company
1. DATA ITEM NO. A001		2. TITLE OF DATA ITEM Monthly Progress Reports (Technical)		3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)		5. CONTRACT REFERENCE Paragraphs 3.7, 3.11 and 4.1 of SOW		6. REQUIRING OFFICE PEO IWS 2	
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED C	10. FREQUENCY Monthly	12. DATE OF FIRST SUBMISSION 15 <sup>th</sup> of the month following Task Order (TO) Award	14. DISTRIBUTION ADDRESSEE See Block 16 and Enclosure Number 1	
8. APP CODE		11. AS OF DATE 0	13. DATE OF SUBSEQUENT SUBMISSION Monthly thereafter	b. COPIES Draft Final REQ REPRO	
16. REMARKS  *Reports shall be in contractor format approved by the Program Officer. The contractor shall provide Monthly Progress Reports (Technical) that contain a monthly status of technical progress, including approved metrics, schedule progress, key accomplishments or milestones, technical risk status (including the top risk's mitigation status and any recommendations), reliability analysis, updates to life cycle costs and objectives for the next month. It shall also include the status of the program measured against the baseline PMP.  Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.				15. TOTAL	
G. PREPARED BY Dennis Cole		H. DATE 23-Sep-13		I. APPROVED BY Lynn Christian	
				J. DATE 23-Sep-13	

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A. CONTRACT LINE ITEM NO. <b>CLIN 0001 - EASR Study</b>			B. EXHIBIT <b>A</b>		C. CATEGORY TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		
D. SYSTEM/ITEM <b>Enterprise Air Surveillance Radar (EASR) TO 0010</b>				E. CONTRACT/PR NO. <b>N00014-09-D-0696/0003</b>		F. CONTRACTOR <b>Raytheon Company</b>	
1. DATA ITEM NO. <b>A002</b>		2. TITLE OF DATA ITEM <b>Meeting Materials (Kick-off, Program/Technical Reviews, TIMs, and Final Review)</b>				3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE <b>Paragraphs 3.8.1, 3.8.2, 3.8.3, 3.8.4, 3.14.2, and 4.2 of SOW</b>			6. REQUIRING OFFICE <b>PEO IWS 2</b>	
7. DD 250 REQ <b>LT</b>	9. DIST STATEMENT REQUIRED <b>C</b>	10. FREQUENCY <b>As Required</b>	12. DATE OF FIRST SUBMISSION <b>As Req</b>	14. DISTRIBUTION			
8. APP CODE		11. AS OF DATE <b>N/A</b>	13. DATE OF SUBSEQUENT SUBMISSION <b>As Req</b>	ADDRESSEE <b>See Block 16 and Enclosure Number 1</b>		b. COPIES	
						Draft <input type="checkbox"/> Final <input type="checkbox"/> REQ <input type="checkbox"/> REPRO <input type="checkbox"/>	
16. REMARKS  Reports shall be in contractor format approved by the Program Officer. Meetings will be scheduled as contained within the SOW. Presentation materials shall address the requirements contained within the SOW. Presentation materials shall be submitted as read-ahead no later than 5 calendar days (48 hours for TIM material) before each meeting. Agendas will be submitted to the Government for concurrence no later than one (1) calendar week before the meeting. Deliver detailed minutes and corrected viewgraphs with action items to the Government not ten (10) days after conclusion of the meeting.  Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.				15. TOTAL			
G. PREPARED BY <b>Dennis Cole</b>			H. DATE <b>23-Sep-13</b>		I. APPROVED BY <b>Lynn Christian</b>		J. DATE <b>23-Sep-13</b>

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A. CONTRACT LINE ITEM NO.			B. EXHIBIT		C. CATEGORY		
CLIN 0001 - EASR Study			A		TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		
D. SYSTEM/ITEM				E. CONTRACT/PR NO.		F. CONTRACTOR	
Enterprise Air Surveillance Radar (EASR) TO 0010				N00014-09-D-0696/0003		Raytheon Company	
1. DATA ITEM NO.		2. TITLE OF DATA ITEM				3. SUBTITLE	
A003		Existing Radar System Detailed Design Description Report					
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE			6. REQUIRING OFFICE	
			Paragraph 3.1, 4.3 of SOW			PEO IWS 2	
7. DD 250 REQ		9. DIST STATEMENT REQUIRED		10. FREQUENCY		12. DATE OF FIRST SUBMISSION	
LT				once		no later than two (2) months after TO award	
8. APP CODE		C		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION	
				N/A		none	
14. DISTRIBUTION							
ADDRESSEE						b. COPIES	
See Block 16 and Enclosure Number 1						Draft	
						Final	
						REQ	
						REPRO	
15. TOTAL							
16. REMARKS Reports shall be in contractor format approved by the Program Officer. The contractor shall provide an in-depth description of the existing radar system and its predicted performance relative to the EASR requirements, and describe the maturity of all existing hardware, software, and firmware. This description must include sufficient documentation to support any claims that this existing system's performance will meet the capabilities claimed by the contractor. Responses should include, but not be limited to: system architecture describing the system and subsystems, drawings, general functionality, operating frequencies, operational capabilities, environmental specifications, and supportability; configuration drawing(s) illustrating and quantifying the proposed system's required geometric footprint and an estimate of shipboard power and cooling (air or water); existing radar system customer base, production statistics, and production cost; overall system and individual subsystem's Technology Readiness Levels (TRL) and Manufacturing Readiness Levels (MRL); test results at both subsystem and system levels previously performed on the existing radar system (results must include detection coverage, dynamic range, clutter attenuation, false alarm control, antenna sidelobe levels, and electronic protection); and reliability, maintainability, and availability of the existing radar system.  The Report shall provide the data described above including corrections and responses to comments addressed at the Kick-Off Meeting. It shall include written narrative to support, explain and summarize the data and Kick-off discussions.  Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.							
G. PREPARED BY			H. DATE		I. APPROVED BY		J. DATE
Dennis Cole			23-Sep-13		Lynn Christian		23-Sep-13

CONTRACT DATA REQUIREMENTS LIST						Form Approved OMB No. 0704-0188	
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A. CONTRACT LINE ITEM NO.			B. EXHIBIT		C. CATEGORY		
CLIN 0001 - EASR Study			A		TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		
D. SYSTEM/ITEM				E. CONTRACT/PR NO.		F. CONTRACTOR	
Enterprise Air Surveillance Radar (EASR) TO 0010				N00014-09-D-0696/0003		Raytheon Company	
1. DATA ITEM NO.		2. TITLE OF DATA ITEM				3. SUBTITLE	
A004		Proposed EASR System Description Document (SDD) Report					
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE			6. REQUIRING OFFICE	
			Paragraph 3.3, 4.4 of SOW			PEO IWS 2	
7. DD 250 REQ		9. DIST STATEMENT REQUIRED		10. FREQUENCY		12. DATE OF FIRST SUBMISSION	
LT				As Necessary		no later than six (6) months after TO award	
8. APP CODE		C		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION	
				N/A		See block 16	
14. DISTRIBUTION						b. COPIES	
ADDRESSEE						Draft	
See block 16 and Enclosure Number 1						Final	
						REQ	
						REPRO	
15. TOTAL							
16. REMARKS							
<p>Report shall be in contractor format approved by the Program Officer. Building on the characteristics of the existing radar system, the contractor shall develop a concept of modifications to meet the requirements of the EASR system.</p> <p>The contractor shall provide an in-depth description of the proposed EASR system and its predicted performance relative to the EASR requirements, and describe the maturity of all proposed hardware, software, and firmware. Responses should include, but not be limited to: system architecture describing the system and subsystems, operating frequencies, operational capabilities, environmental specifications, and supportability; configuration drawing(s) illustrating and quantifying the proposed system's required geometric footprint and an estimate of shipboard power and cooling (air or water); overall system and individual subsystem's Technology Readiness Levels (TRL).</p> <p>The proposed EASR SDD shall address scalability of the proposed EASR radar to meet lesser requirements for the use on smaller ships. The scalability can be addressed in an appendix to the EASR SDD.</p> <p>If different versions of the EASR are recommended for backfit versus forward fit, e.g. a rotating antenna for backfit and stationary arrays for forward fit, both versions shall be described in the same amount of detail.</p> <p>The report shall provide the data described above including corrections and responses to comments addressed at the Technical/Program Review. It shall include written narrative to support, explain and summarize the data and Technical/Program Review discussions.</p> <p>This report shall be updated as necessary and included as an appendix in the Final Report (CDRL A005).</p> <p>Copies of this report shall be distributed in accordance with Enclosure Number 1.</p> <p>DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.</p>							
G. PREPARED BY			H. DATE		I. APPROVED BY		J. DATE
Dennis Cole			23-Sep-13		Lynn Christian		23-Sep-13

CONTRACT DATA REQUIREMENTS LIST						Form Approved OMB No. 0704-0188		
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A. CONTRACT LINE ITEM NO.			B. EXHIBIT		C. CATEGORY			
CLIN 0001 - EASR Study			A		TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>			
D. SYSTEM/ITEM				E. CONTRACT/PR NO.		F. CONTRACTOR		
Enterprise Air Surveillance Radar (EASR) TO 0010				N00014-09-D-0696/0003		Raytheon Company		
1. DATA ITEM NO.		2. TITLE OF DATA ITEM			3. SUBTITLE			
A005		Final Report						
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE		6. REQUIRING OFFICE			
			Paragraph 3.8.2, 4.5 of SOW		PEO IWS 2			
7. DD 250 REQ		9. DIST STATEMENT REQUIRED		10. FREQUENCY		14. DISTRIBUTION		
DD				Once		ADDRESSEE See Block 16 and Enclosure Number 1		
8. APP CODE		C		11. AS OF DATE		b. COPIES		
A				N/A		Draft <input type="checkbox"/> Final <input type="checkbox"/> REQ <input type="checkbox"/> REPRO <input type="checkbox"/>		
12. DATE OF FIRST SUBMISSION At contract completion								
13. DATE OF SUBSEQUENT SUBMISSION None								
16. REMARKS Reports shall be in contractor format approved by the Program Officer. The Final Report shall be delivered at contract completion compiling the accomplishments and risk reduction achieved. The Final Report shall include the Proposed EASR System Description Document (SDD) Report; (CDRL A004), Risk Reduction Demonstration Plan and Results Report; (CDRL A009), Proposed EASR System Radar Performance Study Report; (CDRL A006), and Total Ownership Cost (TOC) Model; (CDRL A008) as appendices. It should also include a summary of Open Architecture issues encountered; recommendations for future efforts needed to achieve an Open Architecture, mitigation of unresolved risk elements, and the achievement of Technology and Manufacturing Readiness Levels (TRL/MRL) suitable for transition to Engineering Development. The Final Report shall update the included and previously delivered reports/data as appropriate to include the latest information as of the completion of the TO.  Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.								
15. TOTAL								
G. PREPARED BY			H. DATE		I. APPROVED BY		J. DATE	
Dennis Cole			23-Sep-13		Lynn Christian		23-Sep-13	

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A. CONTRACT LINE ITEM NO.		B. EXHIBIT		C. CATEGORY	
CLIN 0001 - EASR Study		A		TOP <input type="checkbox"/>	TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>
D. SYSTEM/ITEM			E. CONTRACT/PR NO.		F. CONTRACTOR
Enterprise Air Surveillance Radar (EASR) TO 0010			N00014-09-D-0696/0003		Raytheon Company
1. DATA ITEM NO.	2. TITLE OF DATA ITEM			3. SUBTITLE	
A006	Proposed EASR System Radar Performance Study Report				
4. AUTHORITY (Data Acquisition Document No.)		5. CONTRACT REFERENCE		6. REQUIRING OFFICE	
		Paragraph 3.4, 4.6 of SOW		PEO IWS 2	
7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION	
LT		As Necessary	no later than ten (10) months after TO award	ADDRESSEE	
8. APP CODE	C	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	See Block 16 and Enclosure Number 1	b. COPIES
		N/A	See block 16		Draft Final
15. REMARKS Reports shall be in contractor format approved by the Program Officer. The contractor shall provide the results of the Performance Assessment of the Proposed EASR System.  Appendices to this report shall describe computational tools used to obtain the results.  The report shall include corrections and responses to comments addressed at the TIM or Technical/Program Review. It shall include written narrative to support, explain and summarize the data and TIM or Technical/Program Review discussions.  This Proposed EASR System Radar Performance Study Report shall be updated as necessary and included as an appendix in the Final Report (CDRL A005).  Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEOIWS 2.				15. TOTAL	
G. PREPARED BY		H. DATE	I. APPROVED BY		J. DATE
Dennis Cole		23-Sep-13	Lynn Christian		23-Sep-13



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A. CONTRACT LINE ITEM NO. <b>CLIN 0001 - EASR Study</b>			B. EXHIBIT <b>A</b>		C. CATEGORY TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		
D. SYSTEM/ITEM <b>Enterprise Air Surveillance Radar (EASR) TO 0010</b>				E. CONTRACT/PR NO. <b>N00014-09-D-0696/0003</b>		F. CONTRACTOR <b>Raytheon Company</b>	
1. DATA ITEM NO. <b>A007</b>		2. TITLE OF DATA ITEM <b>Program Management Plan (PMP)</b>				3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE <b>Paragraphs 3.7, 3.11 and 4.7 of SOW</b>			6. REQUIRING OFFICE <b>PEO IWS 2</b>	
7. DD 250 REQ <b>LT</b>	9. DIST STATEMENT REQUIRED <b>C</b>	10. FREQUENCY <b>As Necessary</b>	12. DATE OF FIRST SUBMISSION <b>30 days after TO award</b>	14. DISTRIBUTION			
8. APP CODE		11. AS OF DATE <b>N/A</b>	13. DATE OF SUBSEQUENT SUBMISSION <b>See block 16</b>	ADDRESSEE <b>See Block 16 and Enclosure Number 1</b>		b. COPIES	
						Draft	Final
						REQ	REPRO
16. REMARKS Reports shall be in contractor format approved by the Program Officer. The contractor shall develop a Program Management Plan (PMP) with an associated Contract Work Breakdown Structure (CWBS) down to Level 3 that is directly traceable to the overall program schedule, and provides visibility and accountability to the lowest level necessary to reflect the way the work is being performed. The Program Management Plan shall include a description of the contractor's management structure; an organization chart showing the Key Personnel assigned to the project and their responsibilities, and contact information for principal Points of Contact (POC) for each area. The PMP shall also include a schedule for the effort and a description of the process that will be used to monitor schedule status during the effort. It shall also provide a process to assess the risks associated with program, schedule and achievement of technical requirements. Specific risk management functions shall include as a minimum: (1) Identify known and potential risks; (2) Assess risks, including a relative ranking by program impact and probability of risk being realized, and establish critical thresholds; (3) Define methods or alternatives to mitigate or minimize these risks, including the identification of criteria upon which programmatic decisions must be made to initiate alternatives or make other programmatic changes. The Government may also identify risks for the contractor to track and report. The PMP shall include emphasis on performance metrics, risk management and the contract work breakdown structure. The initial PMP shall provide a baseline containing threshold and ceiling values for, schedule, and performance parameters established at the onset of the program.  Subsequent updates/revisions to PMP shall clearly show changes against the baseline. The PMP shall be briefed at the kick-off meeting and delivered to the Government with the Meeting Materials in accordance with CDRL A002.  Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.				15. TOTAL			
G. PREPARED BY <b>Dennis Cole</b>			H. DATE <b>23-Sep-13</b>		I. APPROVED BY <b>Lynn Christian</b>		J. DATE <b>23-Sep-13</b>

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A. CONTRACT LINE ITEM NO. <b>CLIN 0001 - EASR Study</b>			B. EXHIBIT <b>A</b>		C. CATEGORY TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		
D. SYSTEM/ITEM <b>Enterprise Air Surveillance Radar (EASR) TO 0010</b>				E. CONTRACT/PR NO. <b>N00014-09-D-0696/0003</b>		F. OFFEROR <b>Raytheon Company</b>	
1. DATA ITEM NO. <b>A008</b>		2. TITLE OF DATA ITEM <b>Total Ownership Cost (TOC) Model</b>				3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE <b>Paragraph 3.5 and 4.8 of SOW</b>			6. REQUIRING OFFICE <b>PEO IWS 2</b>	
7. DD 250 REQ <b>LT</b>	9. DIST STATEMENT REQUIRED <b>C</b>	10. FREQUENCY <b>As Necessary</b>	12. DATE OF FIRST SUBMISSION <b>no later than ten (10) months after TO award</b>		14. DISTRIBUTION		
8. APP CODE		11. AS OF DATE <b>N/A</b>	13. DATE OF SUBSEQUENT SUBMISSION <b>See block 16</b>		See Block 16 and Enclosure Number 1		b. COPIES
					Draft		Final
					REQ		REPRO
15. REMARKS  The Contractor shall deliver the cost model software that is used to generate the Total Ownership Cost (TOC) estimates on this contract. Information required to use the model such as user guides, documentation, and assumptions, shall be included with the submittal. The model shall include development, production, Operations and Sustainment (O&S), disposal costs, and software source lines of code (SLOC). Format shall reflect the Government-approved Contractor Work Breakdown Structure (CWBS). The model will contain the CWBS data element dictionary. The TOC model shall be submitted in MS Excel format and have the ability to be edited (hours, rates, etc.) to immediately observe impact to the total price via links and formulas native to MS Excel. All distributions shall be delivered via CD ROM. Filenames must be 20 characters or less in length and contain no special characters. Files must be no more than four folders deep. Upon submission, the Contractor shall notify the Government (PCO, PM and data manager) by Letter of Transmittal via e-mail that the data has been posted on the ICDS. The Total Ownership Cost Model shall be updated at the Final Review, and included as an appendix with the Final Report (CDRL A005). Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.					15. TOTAL		
G. PREPARED BY <b>Dennis Cole</b>			H. DATE <b>23-Sep-13</b>		I. APPROVED BY <b>Lynn Christian</b>		J. DATE <b>23-Sep-13</b>

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A. CONTRACT LINE ITEM NO.			B. EXHIBIT		C. CATEGORY			
CLIN 0001 - EASR Study			A		TOP <input type="checkbox"/> TM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>			
D. SYSTEM/ITEM				E. CONTRACT/PR NO.		F. OFFEROR		
Enterprise Air Surveillance Radar (EASR) TO 0010				N00014-09-D-0696/0003		Raytheon Company		
1. DATA ITEM NO.		2. TITLE OF DATA ITEM			3. SUBTITLE			
A009		Risk Reduction Demonstration Plan and Results Report						
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE		6. REQUIRING OFFICE			
			Paragraph 3.6 and 4.9 of SOW		PEO IWS 2			
7. DD 250 REQ		9. DIST STATEMENT REQUIRED		10. FREQUENCY		14. DISTRIBUTION		
LT				As Necessary		ADDRESSEE		
8. APP CODE		C		11. AS OF DATE		b. COPIES		
				12. DATE OF FIRST SUBMISSION		Draft		
				Within six (6) months after TO award		Final		
				13. DATE OF SUBSEQUENT SUBMISSION		REQ		
				See block 16		REPRO		
16. REMARKS Reports shall be in contractor format approved by the Program Officer. The Risk Reduction Demonstration Plan and Results Report shall include results of the Risk Reduction Demonstrations, and shall describe the radar characteristics as tested.  Updates to the Risk Reduction Demonstration Plan and Results Report shall be addressed and presented as appropriate at the periodic Program Reviews and TIMs (as mutually agreed) and included as an appendix in the Final Report (CDRL A005).  Copies of this report shall be distributed in accordance with Enclosure Number 1.  DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PEO IWS 2.						15. TOTAL		
G. PREPARED BY			H. DATE		I. APPROVED BY		J. DATE	
Dennis Cole			23-Sep-13		Lynn Christian		23-Sep-13	

**CONTRACT DATA REQUIREMENTS LIST  
INSTRUCTIONS FOR DISTRIBUTION**

**DISTRIBUTION OF TECHNICAL REPORTS AND FINAL REPORT**  
(A SF 298 must accompany the final report)

❖ ADDRESSEE	❖ DODAAD CODE	❖ NUMBER OF COPIES	
		UNCLASSIFIED/ UNLIMITED	UNCLASSIFIED/LIMITED AND CLASSIFIED
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John Stewart E-mail: john.s.stewart@navy.mil	N00164	1	1
Contracting Officer Representative Ana Diaz E-mail: Ana.m.diaz@navy.mil	N00024	1	1
David Starkston E-mail david.starkston.ctr@navy.mil	N00014	1	1
Administrative Contracting Officer*	S2205A	1	1
Director, Naval Research Lab Attn: Code 5596 4555 Overlook Avenue, SW Washington, D.C. 20375-5320 E-mail: <a href="mailto:reports@library.nrl.navy.mil">reports@library.nrl.navy.mil</a>	N00173	1	1
Defense Technical Information Center ATTN: DTIC-OA (Eva Adams or Shari Pitts) 8725 John J. Kingman Road STE 0944 Ft. Belvoir, VA 22060-6218 E-mail: <a href="mailto:TR@Dtic.mil">TR@Dtic.mil</a>	HJ4701	2	2

\* Send only a copy of the transmittal letter to the Administrative Contracting Officer; do not send actual reports to the Administrative Contracting Officer.

**ELECTRONIC SUBMISSIONS OF TECHNICAL REPORTS IS PREFERRED AND ENCOURAGED. ELECTRONIC SUBMISSION SHOULD BE SENT TO THE E-MAIL ADDRESSES PROVIDED IN THE ABOVE TABLE, HOWEVER PLEASE NOTE THE FOLLOWING:**

- Only Unlimited/Unclassified document copies may be submitted by e-mail.
- Unclassified/Limited has restricted distribution and a classified document (whether in its entirety or partially) is to be distributed in accordance with classified material handling procedures.
- Electronic submission to DIRECTOR, NAVAL RESEARCH LAB, shall be unclassified/unlimited reports and 30 pages or less. If unclassified and more than 30 pages, hardcopies of reports must be mailed.

- Electronic submission to DTIC shall be unclassified/unlimited reports. If submission is for limited documents, please send them in on a disk or sign up for DTIC's web-based document submission system at <http://www.dtic.mil>. DTIC prefers .pdf, .tif, and .ps files; however, other formats will also be accepted. **NOTE:** DTIC can no longer accept the following file types via email: password protected, zipped or compressed files, file with the extensions: \*.vbs, \*.cmd, \*.exe, \*.bat, \*.com, \*.mp3, \*.eml and \*.dll.

If the Program Officer directs, the Contractor shall make additional distribution of technical reports in accordance with a supplemental distribution list provided by the Program Officer.

#### DISTRIBUTION OF PROGRESS REPORTS

The minimum distribution for progress reports is as follows:

ADDRESSEE	DODAAD CODE	NUMBER OF COPIES	
		UNCLASSIFIED / UNLIMITED	UNCLASSIFIED/ LIMITED AND CLASSIFIED
Program Officer E-mail: Dennis.j.cole@navy.mil	N00024	1	1
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David Starkston E-mail david.starkston.ctr@navy.mil	N00014	1	1
Contracting Officer Representative Ana Diaz E-mail: ana.m.diaz@navy.mil	N00024	1	1
Administrative Contracting Officer*	S2205A	1	1

\*Send only a copy of the transmittal letter to the Administrative Contracting Officer; do not send actual reports to the Administrative Contracting Officer.

**Statement of Work**  
**Enterprise Air Surveillance Radar (EASR) Study**  
**Task Order 0003**

**1. Background**

Issues of obsolescence and diminishing manufacturing resources (DMS) are becoming critical for both the AN/SPS-48E/F and AN/SPS-49A(V)1 radars. This affects both logistic support and new ship construction. As a result, the Government has identified the need for developing a new radar which will assume the capabilities of both the AN/SPS-48 and the AN/SPS-49 radars for both backfit on existing ships and forward fit for new ship construction. This new radar will be referred to as the Enterprise Air Surveillance Radar (EASR).

The EASR envisioned must meet the aggregate performance needs of the different candidate ship classes for ship self-defense, situational awareness, and air traffic control, but will not necessarily represent a superset of current SPS-48/49 requirements. The requirements for EASR are listed in Reference Number 5.1 entitled, "Reliability, Availability, and Maintainability", Reference Number 5.2 entitled, "Shipboard Environmental Parameters", Reference Number 5.3 entitled, "SPS-48/49 Size, Weight and Power Values" and Reference Number 5.4 entitled, "EASR Performance Requirements Weapon". Support is limited to coarse designations to multi-function radars (e.g. AN/SPY-3) or tracking illuminators (e.g. Mk 95) as well as to launchers (e.g. Rolling Airframe Missile (RAM), and Evolved Sea Sparrow Missile (ESSM)). There is no requirement for mid-course guidance and/or slaved illumination. The Government considers either L-band (1215-1400 MegaHertz (MHz)) or S-band (2900-3400 MHz) as the most likely operating band for this radar, but other bands may be considered.

Affordability of the new EASR radar is a major consideration for this solicitation and the requirements listed reflect performance trade-offs deemed necessary to achieve cost goals.

In back fit installation, above deck equipment with a weight and footprint (Reference 5.3 entitled, "SPS-48/49 Size, Weight and Power Values" similar to that of the combined AN/SPS-48 or AN/SPS-49 systems may represent the most desirable solution. In forward fit new construction, commonality of antenna/sub-array/subsystems with the back fit system are desired to the extent practical.

Smaller versions of the EASR scaled from the primary system, that could be used on smaller Navy ships as well as U.S. Coast Guard vessels must also be addressed during the EASR study. Two (2) examples for sizing these scaled versions are to reduce the range and altitude requirements specified for the primary system in the classified addendum to 70% in one variation and 50% in the other variation of the values against the same targets. As appropriate for the scaled variants, corresponding reductions in clutter improvement factor, dynamic range, and accuracy are acceptable. Scalability will ensure that the antenna technology used in both concepts will be common.

The AN/SPS-48/49 radar suite provides air surveillance capability on eleven (11) "Big Deck" Amphibious Assault Ships LHD/LHA and eleven (11) Aircraft Carrier (CVN) platforms and these are all candidates for the EASR backfit. The AN/SPS-49 is installed separately from the AN/SPS-48 on twelve (12) Landing Ship Dock (LSD)-class ships scheduled to retire by 2035 and four (4) land sites. No backfit requirements exist for these SPS-49 radars. The AN/SPS-48 is installed separately from the AN/SPS-49 on twelve (12) Amphibious Transport Docks (LPD)-class ships and six (6) land sites. These are candidates for an EASR backfit. For new ship construction it is noted that the U.S. Navy intends to maintain a fleet of eleven (11) each of the LHD/LHA class and of the CVN class by building one each every five (5) years, with fifty (50)-year service-life expectancies. The smaller variant is a candidate for new Coast Guard Cutters and for the Littoral Combat Ship (LCS).

**2. Objective**

The objective of Task Order (TO) 0003 is to identify radar concepts for which a substantial hardware base already exists and to show by analysis and/or incremental hardware development and demonstration how this radar concept can be evolved to meet the stated EASR requirements. A combination of analysis, combined with prototyping of critical subsystems and/or technology components to demonstrate risk reduction of any upgrades proposed to the existing radar system, and testing as applicable to risk reduction demonstration will be conducted. The contractor shall determine the mix of analysis, hardware prototyping, and test which provide the highest level of risk reduction

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for the EASR system.

### **3. Requirements**

The contractor shall commit the following capital investment equipment, which includes servers, switches, storage, software, other IT equipment pertinent to the demonstration phase, and some modifications to the contractors Far Field Test Range in Pelham, NH necessary to support the EASR demonstration. In addition, for the purpose of conducting the demonstration, the contractor shall provide the entire front end electronics from their Closed Loop Track Demo (CLTD), a previous company funded demonstration program. This investment includes the Radiator Panel, Overlap Beamformer, Radar Modular Assembly (RMA), Transmit/Receive Integrated Multichannel Modules (TRIMMs), and Digital Receiver/Exciter Modules.

The contractor shall perform the following tasks.

#### **3.1 Description of Existing Radar System**

The contractor shall present an in-depth description of the existing radar system at the Kick-Off meeting. The contractor proposed EASR Concept is based upon the Radar Modular Assembly (RMA) architecture matured and demonstrated on Air and Missile Defense Radar (AMDR) and the software design developed and demonstrated on Dual Band Radar (DBR). The contractor shall provide an in-depth description of the leveraged RMA architecture and the DBR software at the kick-off meeting. The presentation shall provide:

- 3.1.1 A description of the proposed EASR system architecture and subsystem definitions including identity with configuration items from legacy programs.
- 3.1.2 EASR predicted performance relative to the EASR requirements.
- 3.1.3 Discussion of EASR ship fit including SWAP (space, weight & power), environmental performance and supportability.
- 3.1.4 An in-depth description of the RMA architecture and the DBR software architecture.
- 3.1.5 A description of the maturity of all existing hardware, software, and firmware items including demonstrated performance and manufacturing and technical maturity levels.

The contractor shall deliver the Existing Radar System Detailed Design Description in accordance with CDRL A003.

#### **3.2 Proposed EASR System**

Building on the characteristics of the existing radar system, the contractor shall develop an approach for evolution of the radar to meet the requirements of the EASR system, which will be referred as the "Proposed EASR System". Utilizing the RMA architecture and the DBR software the contractor shall develop the proposed EASR concept to a preliminary design level. This shall include the design of a full size, tactical array structure, pedestal and rotary joint.

The contractor shall perform study tasks which shall provide the following outputs:

- 3.2.1 A detailed description of the required modifications to the existing AMDR & DBR hardware, software and firmware items to meet the EASR performance, ship fit and environmental requirements. This shall include the assessment of the associated development cost and schedule.
- 3.2.2 A detailed description of ship fit requirements for both back fit on existing platforms and forward fit on new ship construction. This shall include estimates of topside weight and a center of gravity assessment compared with the current SPS-48/49 systems, swing circle or superstructure size, and prime power requirements.
- 3.2.3 The contractor shall provide a preliminary design for any adaptations required to meet the specified environmental requirements.
- 3.2.4 An assessment of the cost impact (development and recurring) and suggested relaxation of EASR requirements. Additionally, the contractor shall evaluate the cost impact of any requirements which necessitate modification of the existing hardware items.

- 3.2.5 An approach to providing a flexible external interface to the Combat Management System (CMS) which will readily support pub/sub for forward fit and adaption to legacy back-fit ship interfaces.
- 3.2.6 The contractor shall provide developmental cost and schedule estimates for any EASR performance parameter or functionality that requires development beyond the existing RMA radar system.
- 3.2.7 An assessment of the Reliability, Availability and Maintainability performance (reference 5.1 entitled, "Reliability, Availability and Maintainability") based on 120-day missions without critical failure. This will include the development of proposed criteria for defining a critical failure for the EASR System, and in particular the Antenna Subsystem.
- 3.2.8 Development of the EASR Open System Architecture approach by continuing the Open Systems Architecture approaches implemented on AMDR and DBR.

### **3.3 Studies**

The contractor shall perform studies to address scalability of the Proposed EASR System radar including a three (3) face fixed variant and scaled rotators to meet lesser stressing requirements for the Coast Guard Cutters and Littoral Combat Ship (LCS). The studies will:

- 3.3.1 Establish commonality between the three (3) versions of the radars to reduce development and recurring costs.
- 3.3.2 Address performance, cost, and ship-fit issues such as size, weight and prime power.
- 3.3.3 Establish system performance based on equivalent detection range for the 3 face fixed variant and detection coverage of a 50% and 70% of the baseline EASR range and altitude coverage requirements for the scaled variants. Other variants may be considered for specific ship classes. EP requirements for each of the variants will also be assessed.

The contractor shall present the results of the EASR Trade Studies to the Government five (5) months after TO award.

The contractor shall develop and deliver a proposed EASR System Description Document in accordance with CDRL A004.

### **3.4 Performance Assessment of Proposed EASR System**

The contractor shall perform a detailed study assessing the performance of the Proposed EASR System. If different versions are proposed for backfit and forward fit, both shall be analyzed to the same level of detail. The contractor shall develop the proposed EASR concept to a system preliminary design level. The assessment shall include a performance parameter compliance matrix documenting the proposed system's ability to meet the individual EASR parameters. This must clearly identify which capabilities will be met by the proposed radar system. As part of the system design effort, the contractor shall assess compliance to all EASR requirements including performance, environmental and SWAP.

As part of the system design effort the contractor shall perform the following system assessments/studies and present the following results to the Government nine (9) months after TO award: A Proposed EASR System Radar Performance Study Report shall be submitted in accordance with CDRL A006.



- 3.4.1 The contractor shall provide a detailed Blake Chart including transmit power, transmit antenna gain, receive antenna gain, all ohmic and non-ohmic losses, and the system noise temperature. For ease of comparisons between concepts, the reference point for antenna gains and noise temperature shall be the plane directly in front of the antenna aperture. The Blake Chart shall represent a typical search dwell used at low elevation and specified azimuth. Extrapolating from the existing SPS-48 and SPS-49 radars it is required that contacts provided to the combat system tracker in each search frame have fully resolved range and Doppler ambiguities. The losses resulting from this ambiguity resolution process, including the effect of blind ranges and blind Doppler frequencies, shall be included. Furthermore, a detailed breakdown of all processing losses including antenna beam shape losses, pulse compression weighting, range straddling, Doppler straddling, Doppler weighting, Constant False Alarm Rate (CFAR) loss, beam shape, and array scan losses, shall be included and substantiated. A detailed Blake Chart is desired for each configuration of the system.
- 3.4.2 The contractor shall develop the detailed Blake Chart for the EASR baseline and three (3) variants (two (2) scaled variants of the rotator and the three (3) faced fixed variant). The Blake Chart shall be developed based on the performance of the AMDR EMD hardware. The Blake Chart shall represent typical search dwell for low elevation and will include system losses including Doppler ambiguities, beam shape loss, CFAR, etc. A detailed breakdown of all of the losses shall be provided to the Government. No special modes are required for the contractor EASR Concept, but Blake Charts characterizing the performance of each mode, of this multi-mission radar system, shall be developed.
- 3.4.3 If the proposed radar system needs to implement special modes to meet specific mission requirements, the contractor shall include a description of these different operating modes as well as the resulting impact on the ability of the radar to perform its primary mission.
- 3.4.4 The contractor shall provide a description of the waveforms used for system search and track (i.e. Pulse Doppler, Moving Target Indicator (MTI), single pulse, etc.). This shall include a description of the number of pulses transmitted per coherent processing interval, number of fill pulses used, number of pulses coherently processed, waveform bandwidths and modulation schemes used to support pulse compression, etc. in each waveform.
- 3.4.4.1 The contractor shall provide a detailed waveform table for each mode of the EASR system. The waveform table will be derived from the AMDR and DBR waveform tables.
- 3.4.5 The contractor shall provide a description of radiated energy versus search volume as it relates to covering the required surveillance volume in the specified frame time. For phased array radars the contractor shall describe the fraction of the frame time, which will be allocated to special track dwells.
- 3.4.4.2 EASR System Search concept of operations (CONOPS) for the EASR baseline and the three (3) variants. The contractor shall provide a detailed description of radiated energy versus search volume to achieve the required surveillance volume in the specified frame time.
- 3.4.6 The contractor shall describe the strategy for meeting the requirement for detection of small, slow targets (Unmanned Aerial Vehicles (UAVs) and other slow, aerial targets) at low altitude in the littoral clutter environment (sea and bird returns). The contractor shall discuss the following:
- 3.4.6.1 Discuss any additional waveforms or modes that are required.
- 3.4.6.2 Discuss how false alarm rates will be regulated to an acceptable level.
- 3.4.6.3 Discuss handling of track initiation.
- 3.4.6.4 Discuss how the radar will simultaneously meet requirements for detection of all threats.
- 3.4.6.5 The contractor shall provide an EASR System CONOPS for the detection and tracking of small, slow targets (UAVs) and other slow, aerial targets at low altitude in the littoral clutter environment (sea and bird returns). The EASR approach will leverage the DBR and AMDR CONOPS for the detection and tracking of similar targets. The presentation to the Government will include the waveforms utilized, false alarm mitigation techniques, track initiation and radar resource utilization for simultaneous operation in a multi-mission role.

- 3.4.7 The contractor shall provide a description of the system tracking strategy (track while scan, dedicated tracking, some combination of the two, etc.). The contractor shall describe the maximum number of tracks that can be accommodated in each mode.
- 3.4.7.1 EASR Tracking CONOPS including a description of the system tracking strategy and the maximum number of tracks. The EASR CONOPS is derived from DBR and AMDR.
- 3.4.8 The contractor shall discuss dynamic range and out-of-band blocking performance of the proposed radar design. The contractor shall describe in-band linearity performance (Third Order Intercept (TOI) dynamic range) and spur-free dynamic range.
- 3.4.8.1 EASR Hazardous Weather CONOPS derived from DBR.
- 3.4.8.2 EASR System receive performance, including out-of-band blocking, in-band TOI and spur free dynamic range, based on AMDR EMD hardware performance.
- 3.4.9 The contractor shall state the radar operating frequency range of the proposed system. The contractor shall specifically identify the number of frequency channels available for operation, the minimum number of frequencies required for operation, and the frequency or range separation required for two identical radar systems located on different ship platforms to operate in close proximity without degradation. As frequency selection must address the electromagnetic environment in which the radar has to operate, the contractor shall discuss the ability of the system to operate in the relevant naval environment.
- 3.4.9.1 The contractor shall provide the EASR CONOPS for frequency management including operational frequency range and the number of frequency channels.
- 3.4.9.2 The contractor shall provide assessment of EASR interoperability based on frequency management, out-of-band emissions, antenna sidelobe/notch levels and in-band TOI. Assessment will be based on AMDR EMD hardware performance.
- 3.4.10 The contractor shall describe electronic protection features included in the radar design. This shall include antenna sidelobe levels and sidelobe cancellation against stand-off jamming and a discussion of techniques proposed to counter responsive jamming. Raytheon shall describe sidelobe blanker designs and their ability to operate effectively in a jamming environment.
- 3.4.10.1 The contractor shall provide the EASR EP CONOPS and associated impact assessment for the specified responsive and stand-off jammers. EASR EP approach will include the use of a blanker array, antenna sidelobe control, adaptive beamforming and processing techniques. The EASR hardware performance, such as channel pair cancellation ratio, is based on AMDR EMD hardware performance. The EASR CONOPS leverages the CONOPS and processing techniques from AMDR and DBR.

The contractor shall develop and deliver the Proposed EASR System Radar Performance Study Report in accordance with CDRL A006.

### **3.5 Cost Study for Proposed EASR System**

Leveraging the AMDR Total Ownership Cost (TOC) model, the contractor shall develop a detailed EASR TOC based on the assumptions/guidelines provided in reference number 5.6 entitled, "Framework for the Total Ownership Cost Model". AMDR supplier quotes and cost projections will be used for EASR subassembly costs where applicable. The TOC will be used to identify system cost drivers to enable the identification and execution of appropriate trade studies.

The contractor shall conduct the following cost study trades:

- 3.5.1 Radar Sensitivity / Range – the contractor shall perform parametric evaluation of cost, weight and power versus required sensitivity/range requirements.
- 3.5.2 Radar Duty Cycle – the contractor shall evaluate system level performance/cost impact of operating the EASR at a higher duty cycle. The AMDR based hardware supports radar duty cycles which are significantly higher than the EASR baseline.

3.5.3 System Reliability – the contractor shall evaluate the cost impact of adding various levels of redundancy and condition based maintenance to achieve different mean time between critical failures (MTBCF) and on-board sparing requirements. The contractor shall perform parametric evaluation of acceptable graceful degraded performance and contiguous mission length definitions on MTBCF and cost.

3.5.4 Radar Electronic Protection – The contractor shall evaluate the cost impact of providing various levels of electronic protection. Electronic Protection requirements shall impact the backend processing requirements and the number of auxiliary channels in the array.

3.5.5 Liquid Rotary Joint – The liquid rotary joint is one of only two critical technology risks that need to be mitigated prior to entering EMD. Along with conducting testing, the contractor shall evaluate the system cost/performance impacts of locating the chiller/heat exchanger above the rotary joint and changing to a three (3) face fixed system.

The TOC model shall include a detailed list of assumptions, the analytical approach for each element of cost and provide a cost summary by life cycle phase. The TOC Model shall be fully documented and shall be used for system design trades. The contractor shall describe its analytical approach and cost methodology associated with each WBS element within the TOC Model. The TOC model shall present cost in current year and then year dollars based on the Defense Contract Audit Agency (DCAA) Forward Pricing Rate Agreement.

The contractor shall present the TOC model to the Government nine (9) months after TO award.

The contractor shall develop and deliver the TOC Model to the Government in accordance with CDRL A008.

### **3.6 Risk Reduction Demonstration**

The contractor shall conduct a system level demonstration to verify system level operational performance and to reduce the risk associated with conducting an EMD phase. The EASR Demonstration System shall be a full size array structure, pedestal and rotatory joint, designed to tactical requirements, populated with one fully active RMA. The RMA will utilize AMDR Technical Demonstration revision hardware. The contractor shall conduct the following risk reduction demonstrations with the EASR Demonstration System:

3.6.1 Rotary Joint – The contractor shall demonstrate rotary joint with twenty 10 gigabit (GbE) fibers, power slip ring, and coolant rotary joint.

3.6.2 Rotating track while scan in clutter – The contractor shall demonstrate rotating track while scan in clutter.

3.6.3 Rotating track slow moving targets – The contractor shall demonstrate tracking of slow moving targets while rotating.

3.6.4 Rotating clutter mapping – The contractor shall demonstrate clutter mapping while rotating.

3.6.5 Ghost track rejection while rotating – The contractor shall demonstrate no ghost tracks while rotating.

The Government Team is an integral member of the contractor integrated product team (IPT) structure and will be invited to attend all demonstration events. The contractor shall present the Risk Reduction Demonstration Plan to the Government five (5) months after TO award.

The contractor shall develop and deliver the Risk Reduction Demonstration Plan and Results Report in accordance with CDRL A009.

### **3.7 Program Management Plan**

The contractor shall conduct program management including program control using its Integrated Product Development System (IPDS) for management, control, and reporting as a guide. The contractor shall perform and report earned value monthly. Program risks and opportunities shall be continuously monitored and reported at each major meeting.

The contractor shall develop a Program Management Plan (PMP) in accordance with CDRL A007. Progress against the PMP will be reported at each Program/Technical Review.

The contractor shall provide Monthly Progress Reports in accordance with CDRL A001.

### **3.8 Reviews and Meetings**

The contractor shall conduct, at a minimum, the following meetings in a fully collaborative development environment.

3.8.1 Kickoff Review. Within one (1) month after TO award, the contractor shall host a kick-off meeting at their facility in Sudbury, MA, or other, mutually agreed upon location, for the purpose of reviewing the program requirements; the contractor's technical and management plans (including PMP); the approach to modifying the existing radar system to meet the Government requirements; and the detailed schedule with a detailed contract work breakdown structure (CWBS) that is directly traceable to the overall program schedule to provide visibility and accountability to the lowest level necessary to reflect the way the work is being performed. This kick-off meeting will serve as the venue for reporting the complete "Description of the Existing Radar System". The meeting materials shall be submitted in accordance with CDRL A002.

3.8.2 Final Review and final report. No later than seventeen (17) months after TO award, the contractor shall host a Final Review at their facility in Sudbury, MA, or other, mutually agreed upon location. The contractor shall review all studies and risk reduction demonstrations performed during the execution of this TO. The Final Review will also include a discussion of any remaining development and/or technology risks requiring further maturation/mitigation necessary for transition from the design phase into fabrication, integration and testing. The meeting materials shall be submitted in accordance with CDRL A002. A Final Report shall be delivered in accordance with CDRL A005.

3.8.3 Program Reviews/Technical Reviews. The contractor shall conduct Program Management and Technical Reviews at their facility in Sudbury, MA, or other mutually agreed upon location every four (4) months beginning five (5) months after TO award. At each review, the contractor shall provide progress in concept development and performance estimates, updates on risk reduction plans and emerging results, an update of program risk assessments, program and schedule status, and a review of contract deliverables. The contractor shall also provide program status measured against the baseline Program Management Plan (PMP). Presentation materials shall be submitted in accordance with CDRL A002.

3.8.4 Technical Interchange Meetings (TIMs). At least one (1) TIM will be conducted between the Program Reviews. During those TIMs, the contractor shall provide progress updates. In addition, the contractor shall support any coordination meetings and telephone conversations with the Office of Naval Research (ONR), Naval Sea Systems Command Program Executive Office Integrated Warfare Systems 2.0 (NAVSEA PEO IWS 2), Naval Research Laboratory (NRL), and other appropriate Government representatives. TIM meetings may be conducted remotely and/or at any location mutually agreed upon. The location of Reviews and Meetings may be changed as mutually agreed upon between the Government and the contractor. Presentation materials shall be submitted in accordance with CDRL A002.

### **3.9 Security**

The contractor's facilities shall include appropriate classified document storage and control. The contractor Key Personnel shall possess a minimum of a SECRET level clearance.

All technical data submitted shall be marked as follows:

DISTRIBUTION C. Distribution authorized to U.S. Government agencies and their contractors; Administrative/operational use. Critical Technology; 23 Jan 2013. Other requests shall be referred to NAVSEA PED IWS 2.

### **3.10 Program Management**

The contractor shall assign a qualified Program Manager (PM) who shall have complete responsibility for the planning, execution, control and reporting of all aspects of the program, and for directing in-house and sub-contractors' efforts. The PM shall ensure that the necessary controls are appropriately applied to in-house hardware, software, firmware and interface development and its associated support efforts (e.g., design reviews, safety program, product assurance, Configuration Management (CM), financial management and subcontract management). The PM shall be provided with the necessary authority to utilize the company's resources to ensure the program is accomplished within price, on schedule and within specified technical performance parameters.

### **3.11 Performance Metrics.**

The contractor shall assess performance by identifying metrics to measure technical, price and schedule performance. The contractor shall develop and present these metrics at the Kick-Off Meeting (paragraph 3.8.1 entitled "Kick-Off Review"). Following approval by the Government, the approved set of metrics shall be incorporated into the PMP (CDRL A007) and used to report program progress at subsequent Program Reviews and in Monthly Progress Reports (Technical) in accordance with CDRL A001.

### **3.12 Use of Existing Corporate Plans, Policies, and Procedures**

The contractor is encouraged to use existing corporate plans, policies and procedures (as appropriate) in response to the CDRL deliverable requirements. If existing documents fail to adequately address the requirements, the corporate documentation may be modified as appropriate and submitted. Copies of plans, policies and procedures shall be provided to the Government upon request.

### **3.13 System Architecture**

The Proposed EASR system architecture shall be based on Modular Open System Approach (MOSA) principles using open standards and open interfaces to provide rapid and affordable insertion and refreshment of technology through modular design. MOSA applies to all systems (hardware, software, firmware) developed or procured by the contractor for this TO.

The following information shall be presented at program reviews and TIMs, as appropriate:

3.13.1 Provide recommendations, with appropriate rationale, regarding the level of systems design beyond which industry should retain intellectual property rights and the resulting impact on affordability or open characteristics of the system.

3.13.2 Provide documentation on all key interfaces within the system and identify, with rationale, any interfaces that are not open and also identify all specific standards that have been and are to be implemented for the key interfaces. Hardware key Interfaces will include but not be limited to all interfaces associated with system components.

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3.13.3 Identify all Hardware and all Software/Firmware components within the system, and document how the selected components provide for scalability and sustainment of the system.

3.13.4 Identify any license requirements associated with Commercial Off the Shelf (COTS) or Non-Developmental Item (NDI) components

### **3.14 Environmental**

#### **3.14.1 Marine Environment**

The Proposed EASR system will be permanently installed in a shipboard environment. The Proposed EASR system design shall address the marine environment and shall include consideration of vessel motion and impacts from exposure to atmospheric pressure, humidity, wind, ice, snow, solar radiation, salt spray, sand, hail and dust as described in reference number 5.2 entitled, "Shipboard Environmental Parameters". In the event that an existing system that does not meet the reference shipboard environmental specifications is used as a starting point for the construction of EASR, a detailed description of the required tasks and activities to make the system compliant shall be provided at one of the program reviews.

#### **3.14.2 Radiation Hazards**

The contractor shall assess the Proposed EASR system peak and average power density data to determine the intensity of electromagnetic fields in the near and far field zones and to facilitate development of the necessary radiation controls and procedures required to ensure safe shipboard installation. The contractor shall use this data to calculate safe distances for Hazards of Electromagnetic Radiation to Ordnance (HERO), Hazards of Electromagnetic Radiation to Fuel (HERF), and Hazards of Electromagnetic Radiation to Personnel (HERP) respectively as described in NAVSEA OP 3565. This information shall be provided at the first program review meeting. The meeting materials shall be submitted in accordance with CDRL A002.

### **3.15 Internet Digital Collaboration Site**

The Government will establish and maintain an Internet Digital Collaboration Site (IDCS) for the duration of the contract that the contractor shall use for the purpose of providing secure digital file storage and exchange between the government and Contractor team members. Both classified and unclassified portions of the IDCS will be maintained. The contractor shall post all contract materials to the IDCS.

## **4.0 Deliverables**

- 4.1 Monthly Progress Reports (Technical); (CDRL A001)
- 4.2 Meeting Materials (Kick-off, Program/Technical Reviews, TIMs, and Final Review); (CDRL A002).
- 4.3 Existing Radar System Detailed Design Description Report; (CDRL A003).
- 4.4 Proposed EASR System Description Document (SDD) Report; (CDRL A004).
- 4.5 Final Report; (CDRL A005).
- 4.6 Proposed EASR System Radar Performance Study Report; (CDRL A006).
- 4.7 Program Management Plan (PMP); (CDRL A007).
- 4.8 Total Ownership Cost (TOC) Model; (CDRL A008).
- 4.9 Risk Reduction Demonstration Plan and Results Report; (CDRL A009).

## **5.0 References**

The following attachments from solicitation N00019-13-R-0004 are cited herein and are incorporated into this supplemental statement of work by reference.

5.1 Reliability, Availability, and Maintainability (Attachment 6)

5.2 Shipboard Environmental Parameters (Attachment 7)

5.3 SPS-48/49 Size, Weight and Power Values (Attachment 8)

5.4 EASR Performance Requirements (Attachment 9)

5.5 Framework for the Total Ownership Cost Model (Attachment 11).

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY)		2. REPORT TYPE		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (include area code)



<b>DEPARTMENT OF DEFENSE</b> <b>CONTRACT SECURITY CLASSIFICATION SPECIFICATION</b> <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				<b>1. CLEARANCE AND SAFEGUARDING</b> <b>SER:134-13</b> a. FACILITY CLEARANCE REQUIRED <div style="text-align: center;"><b>SECRET</b></div> b. LEVEL OF SAFEGUARDING REQUIRED <div style="text-align: center;"><b>SECRET</b></div>																																																																																																																	
<b>2. THIS SPECIFICATION IS FOR: (X and complete as applicable)</b>				<b>3. THIS SPECIFICATION IS: (X and complete as applicable)</b>																																																																																																																	
<input checked="" type="checkbox"/> a. PRIME CONTRACT NUMBER <div style="text-align: center;">N00014-09-D-0696 / 0003</div>		<input checked="" type="checkbox"/> a. ORIGINAL (Complete date in all cases) <div style="text-align: right;">DATE (YYYYMMDD) 20130913</div>																																																																																																																			
<input type="checkbox"/> b. SUBCONTRACT NUMBER		<input type="checkbox"/> b. REVISED (Supersedes all previous specs)		<div style="text-align: right;">REVISION NO. DATE (YYYYMMDD)</div>																																																																																																																	
<input type="checkbox"/> c. SOLICITATION OR OTHER NUMBER		<div style="text-align: right;">DUE DATE (YYYYMMDD)</div>		<input type="checkbox"/> c. FINAL (Complete Item 5 in all cases) <div style="text-align: right;">DATE (YYYYMMDD)</div>																																																																																																																	
<b>4. IS THIS A FOLLOW-ON CONTRACT?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated under _____ (Preceding Contract Number) is transferred to this follow-on contract.																																																																																																																					
<b>5. IS THIS A FINAL DD FORM 254?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request dated _____, retention of the classified material is authorized for the period of _____.																																																																																																																					
<b>6. CONTRACTOR (Include Commercial and Government Entity (CAGE) Code)</b>																																																																																																																					
a. NAME, ADDRESS, AND ZIP CODE Raytheon Company 50 Apple Hill Drive Tewksbury, MA 01876-0901		b. CAGE CODE 0A YP7		c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code) Defense Security Service (IOFNV) 1 Tech Drive, Suite 330 Andover, MA 01810-2452																																																																																																																	
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<b>9. GENERAL IDENTIFICATION OF THIS PROCUREMENT</b> Enterprise Air Surveillance Radar concept studies, analysis and risk reduction																																																																																																																					
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**12. PUBLIC RELEASE.** Any information (classified or unclassified) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release ☐ Direct ☒ Through (Specify)

Office of Naval Research, Ms. Betsy DeLong, ONR 31, One Liberty Center, 875 N. Randolph Street, Arlington, VA 22203-1995

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review.  
\*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

**13. SECURITY GUIDANCE.** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.)

Item 11.c: Only IS's approved by DSS shall be used to generate classified information.

1. Information generated under this contract shall be classified in accordance with:

OPNAVINST 5513.8 SCG ID#08-03.1 Unclassified ECM/ECCM, General 2/15/1989

OPNAVINST 5513.8 SCG ID# 08-18.1 Unclassified RADAR, GENERAL 11/12/1998

DoD M-5200.01 Volume 4, DoD Information Security Program: Controlled Unclassified Information (CUI) of 2/24/12

Additionally, all classified material derived from other classified sources will perpetuate the highest classification and any special caveats pertaining thereto.

2. Document preparation and distribution shall be only as prescribed by the Program Officer.

3. The attached FOUO and Intelligence Information Sheets are hereby made a part of this DD 254.

4. To obtain documentation/information submit requests to official listed in 16.a below.

5. Forward copies of any subcontractor DD254's issued incident to this contract to the official shown in item 16.a below.

ONR Program Officer:  
Office of Naval Research,  
Ms. Betsy DeLong, ONR 31  
OLC, 875 N. Randolph Street,  
Arlington, VA 22203-1995  
(703) 588-0069; Unclassified  
Email: betsy.delong@navy.mil

PEO-IWS Program Officer:  
Program Executive Office-Integrated Warfare System 2  
1333 Isaac Hull Avenue SE  
Building 197  
Washington Navy Yard, DC 20376  
(202) 781-1996  
Email: dennis.j.cole@navy.mil

**14. ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract. ☐ Yes ☒ No  
(If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use item 13 if additional space is needed.)

**15. INSPECTIONS.** Elements of this contract are outside the inspection responsibility of the cognizant security office. ☐ Yes ☒ No  
(If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use item 13 if additional space is needed.)

**16. CERTIFICATION AND SIGNATURE.** Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL Diana Pacheco [diana.pacheco@navy.mil]	b. TITLE Contracting Officer for Security Matters	c. TELEPHONE (Include Area Code) (703) 696-8177
--	--	--

d. ADDRESS (Include Zip Code)  
Office of Naval Research  
One Liberty Center, 875 N. Randolph Street  
Arlington, VA 22203-1995

**17. REQUIRED DISTRIBUTION**

- |                                     |   |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | a. CONTRACTOR   |
| <input checked="" type="checkbox"/> | b. SUBCONTRACTOR  |
| <input checked="" type="checkbox"/> | c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR          |
| <input checked="" type="checkbox"/> | d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION |
| <input checked="" type="checkbox"/> | e. ADMINISTRATIVE CONTRACTING OFFICER                             |
| <input checked="" type="checkbox"/> | f. OTHERS AS NECESSARY ONR 31, 43, 25, PEO-IWS2                   |

**"FOR OFFICIAL USE ONLY" (FOUO) INFORMATION SHEET"****1. General**

a. The "For Official Use Only" (FOUO) marking is assigned to information at the time of its creation by a DoD Agency. It is not authorized as a substitute for a security classification marking but is used on official government information that may be withheld from the public under exemptions 2 through 9 of the Freedom of Information Act.

b. Use of the FOUO marking does not mean that the information cannot be released to the public, only that it must be reviewed by the Government prior to its release to determine whether a significant and legitimate government purpose is served by withholding the information or portions of it.

**2. Identification Markings**

a. An unclassified document containing FOUO information will be marked "For Official Use Only" at the bottom of the front cover (if any), on the first page, on each page containing FOUO information, on the back page, and on the outside of the back cover (if any). No portion markings will be shown.

b. Within a classified document, an individual page that contains both FOUO and classified information will be marked at the top and bottom with the highest security classification of information appearing on the page. If an individual portion contains FOUO information but no classified information, the portion will be marked "FOUO."

c. Any "For Official Use Only" information released to a contractor by a DoD Agency is required to be marked with the following statement prior to transfer:

**This document contains information EXEMPT FROM MANDATORY DISCLOSURE under the  
FOIA. Exemption(s) \_\_\_\_\_ apply.**

d. Removal of the "For Official Use Only" marking can only be accomplished by the originator or other competent authority. When the "For Official Use Only" status is terminated, all known holders will be notified to the extent practical.

3. Dissemination. Contractors may disseminate "For Official Use Only" information to their employees and subcontractors who have a need for the information in connection with a classified contract.

4. Storage. During working hours, "For Official Use Only" information shall be placed in an out-of-sight location if the work area is accessible to persons who do not have a need for the information. During nonworking hours, the information shall be stored to preclude unauthorized access. Filing such material with other unclassified records in unlocked files or desks is adequate when internal building security is provided during nonworking hours. When such internal security control is not exercised, locked buildings or rooms will provide adequate after-hours protection or the material can be stored in locked receptacles such as file cabinets, desks, or bookcases.

5. Transmission. "For Official Use Only" information may be sent via first-class mail or parcel post. Bulky shipments may be sent by fourth-class mail.

6. Disposition. When no longer needed, FOUO information may be disposed of by tearing each copy into pieces to preclude reconstructing, and placing it in a regular trash container or as directed by the DoD Agency.

7. Unauthorized Disclosure. Unauthorized disclosure of "For Official Use Only" information does not constitute a security violation but the releasing agency should be informed of any unauthorized disclosure. The unauthorized disclosure of FOUO information protected by the Privacy Act may result in criminal sanctions.

**CONTRACTING OFFICER'S REPRESENTATIVE  
APPOINTMENT LETTER**

04 September 2013

From: Lynn Christian  
To: Ana Diaz  
  
Subj: Appointment as Contracting Officer's Representative  
(COR)  
  
Ref: (a) DFARS 201.602-2  
(b) FAR 3.2  
(c) ONRINST 4205

Pursuant to reference (a) you are hereby appointed as the Contracting Officer's Representative (COR) for the administration of the following contract:

Contract Number: N00014-09-D-0696 Task Order 0003

For: "Enterprise Air Surveillance Radar (EASR) Study"

Name of Contractor:

Raytheon Company  
Integrated Defense Systems  
50 Apple Hill Drive  
Tewksbury, MA 01876

Contract Period of Performance:

Eighteen (18) months awarded as a single period of performance

1. As COR, you have the specific responsibilities detailed below.

a. Furnish the contractor technical direction and guidance in all aspects of the contract. You may formalize your guidance to the contractor in writing, provided that the written guidance does not affect price or duration of the contract and provided that this guidance contains both a signed acknowledgement from the contractor and the following statement:

"In accepting this technical direction and guidance, the contractor agrees that the price and all other terms and conditions of the contract remain unchanged."

2. As a COR **you do not** have the authority to direct the contractor how to perform but are empowered to provide guidance as to what of a technical nature is required. If you are unsure whether giving specific instructions falls within your purview, contact the Contracting Officer for guidance before giving instructions to the contractor.

3. During surveillance of contract performance, take care to ensure this contract does not become a personal services contract through your actions or the actions of other government personnel who may assist you in the performance of your duties.

This distinction between surveillance, which is proper and necessary, and supervision, which is illegal, is violated when surveillance becomes supervision and the contractor is told how to perform the contract. Supervision of the contractor must be scrupulously avoided.

4. COR duties include, but are not limited to:

a. Serving as the technical contact through which the contractor can relay his questions and problems of a technical nature to the Contracting Officer.

b. Monitoring the contractor's performance to ensure that inefficient and/or wasteful methods are not utilized and, if they are, alerting the Contracting Officer. Also, input evaluation reports into CPARS.

c. Reviewing and evaluating contractor estimates to perform work under the contract and advising the Contracting Officer accordingly.

d. Over-viewing contractor performance to determine if the percentage of work performed reasonably corresponds to the percentage of funds expended and alerting the Contracting Officer of any problems.

e. Reviewing contractor progress and financial reports and completing the certification of inspection and acceptance of

services performed through the Wide Area Work Flow (WAWF) system at the end of the contract.

f. Alerting the Contracting Officer to any potential performance problems. If the performance schedule slips, determine the reasons and work with the Contracting Officer to eliminate the problem. Monitor schedule recovery in accordance with the agreed-upon plan.


g. Furnishing the Contracting Officer with contractor requests for changes, deviations, or waivers, including any supporting analysis and other required documentation.

5. Notwithstanding the duties listed above, CORs do not possess the authority of a Contracting Officer, and therefore must not alter the terms and conditions of the basic contract.

6. Relationships between contractors and CORs must be beyond reproach. Therefore, strict compliance with DoD Directive 5500.7 regarding standards of conduct and conflict of interest is required. If you are not familiar with these instructions, please read them as soon as possible. If you need copies, please contact ONR BD00CC, Corporate Counsel.

7. This appointment is effective through the life of the contract, unless you are otherwise relieved.

8. COR authority **may not be** redelegated. However, an "Alternate COR" (ACOR) may be nominated and appointed by the PCO to act only in the absence of the primary COR. The nomination and appointment criteria and procedures for the ACOR are the same as those for the COR.



COR/ACOR Signature (which constitutes  
Acceptance of appointment)

09/04/2013  
Date

Note: Please sign one copy of this memorandum in the space provided above, and upload into the CORT Tool.

# FINANCIAL ACCOUNTING DATA SHEET - NAVY

1. CONTRACT NUMBER (CRITICAL) N0001409D0696		2. SPIN (CRITICAL) 0003		3. MOD (CRITICAL)		4. PR NUMBER 13PR09191-00										
CLIN/SIN	6. LINE OF ACCOUNTING			D. OBJ CLA	E. PARM	F. RFM	G. SA	H. AAA (CRITICAL)	I. IT	J. PAA	K. COST CODE			7. AMOUNT (CRITICAL)	NAVY INTERNAL USE ONLY REF DOC/ACRN	
	A. ACRN (CRITICAL)	B. APPROPRIATION (CRITICAL)	C. SUBHEAD (CRITICAL)								PROJ UNIT	MCC	PDU & SUF			
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														PAGE TOTAL	\$ . 00	
														GRAND TOTAL	\$ . 00	
PREPARED/AUTHORIZED BY:						COMPTROLLER APPROVAL:										
DATE:						FOR FISCAL DATA AND SIGNATURE										
						BY _____ for COMPTROLLER, ONR CONTRACT REVIEWED										

## FINANCIAL ACCOUNTING DATA SHEET – NON-NAVY DoD ACTIVITIES


1. CONTRACT NUMBER (CRITICAL) N0001409D0696		2. SPIIN (CRITICAL) 0003		3. MOD (CRITICAL)		4. PR NUMBER 13PRO9191-00			
5. CLIN/SLIN	6. ACRN (CRITICAL)	7. ACCOUNTING CITATION				8. AMOUNT (CRITICAL)		NAVY INTERNAL USE ONLY REF DOC/ACRN	
	AA	1721319 ASBJ 252 WS020 0 050120 2D 000000 A10001713292 DOC#N0002413RX00630				\$6,000,000.00		PR#13PRO9191-00 FRC:Z130	
						PAGE TOTAL	\$6,000,000.00		
						GRAND TOTAL	\$6,000,000.00		
PREPARED/AUTHORIZED BY:						COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE BY _____ for COMPTROLLER, ONR CONTRACT REVIEWED DATE: _____			
DATE:									



## Contract Distribution Sheet

CR Number: 13PR09191-00  
Contract Number: N0001409D06960003  
Specialist: NO NEG ONR: BD251  
Modification Number:

Distribution Date: **SEP 26 2013**

Distributed By: 

\_\_\_ PCO, ONR Arlington (Original)

\_\_\_ Contractor (Duplicate Original)

Short Contractor Code and Address:

RAYN  
RAYTHEON COMPANY  
RAYTHEON COMPANY - IDS 50 APPLE HILL DR  
TEWKSBURY, MA 01876-6114 US

\_\_\_ ACO

ACO MILSCAP Code and Address:

S2205A  
DCMA RAYTHEON-S2205A  
50 APPLE HILL DRIVE T2FR2  
TEWKSBURY, MA 01876 US

\_\_\_ Payment Office

DODAAD Code and Address:

HQ0337  
DFAS COLUMB, NORTH ENTL-HQ0337  
PO BOX 182266  
COLUMBUS, OH 43218-2266 US

\_\_\_ ONR:

00CC

Program Officer: DELONG, MS. BETSY B, ONR Other

*ED-1014  
9/26/2013*